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(54) **RESCUE DEVICE WITH KITE-TYPE BALLOON MARKER, KITE-TYPE BALLOON & METHOD**

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(52) **U.S. Cl.** ..... **116/210**

(57) **ABSTRACT**

An individual's location is marked to facilitate rescue even under windy weather conditions by using a device including a deflated kite-type balloon attached to a secured line. When rescue is desired, the deflated kite-type balloon is inflated with lighter than air gas and released while secured by the line.

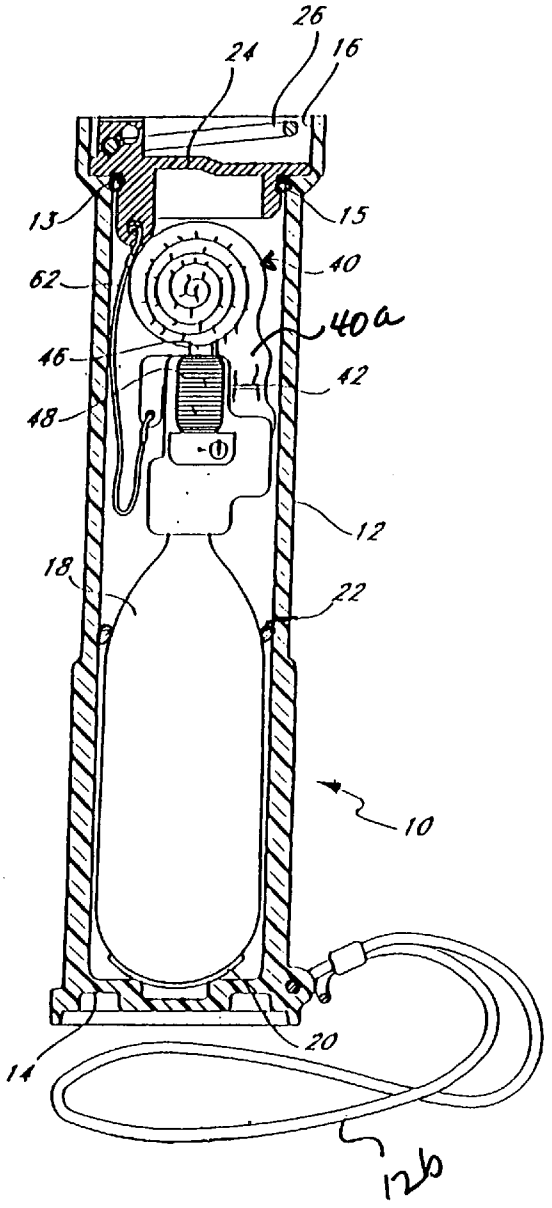


FIG. 1

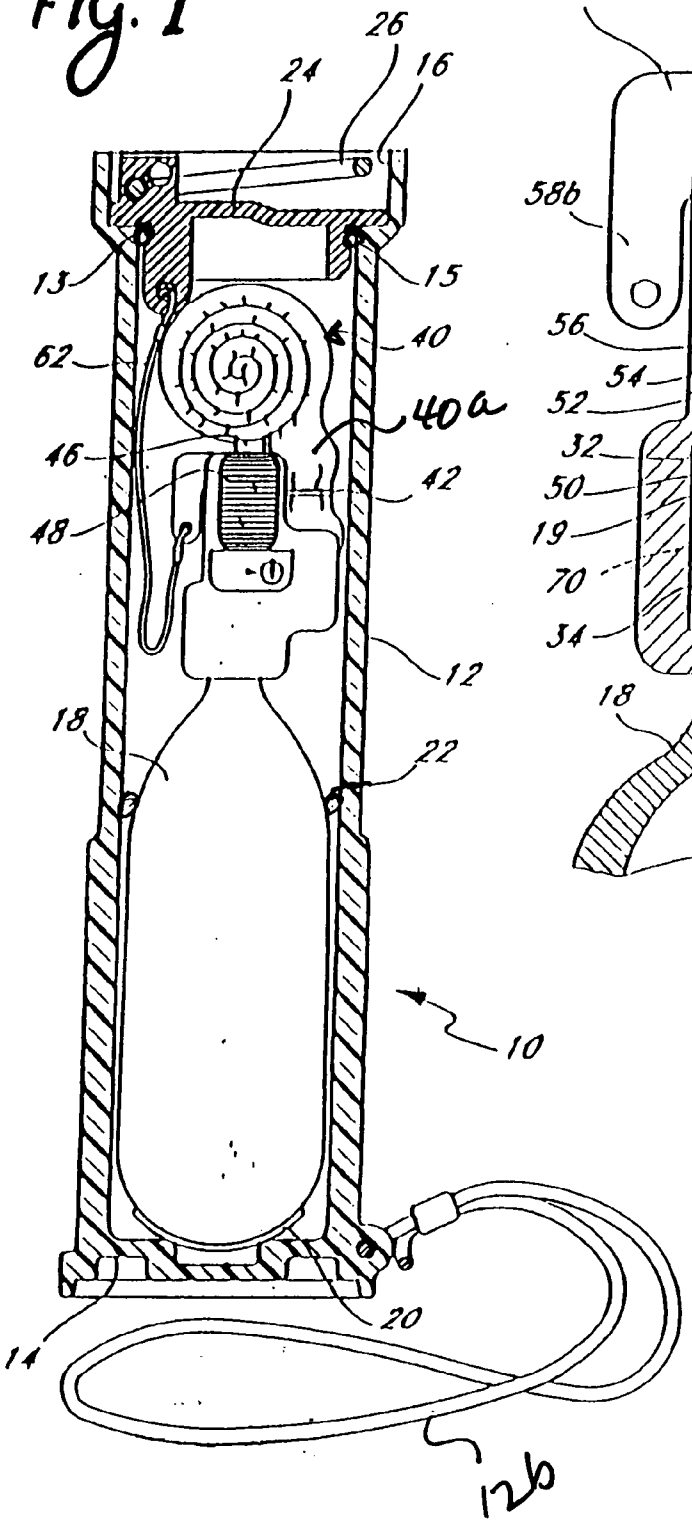
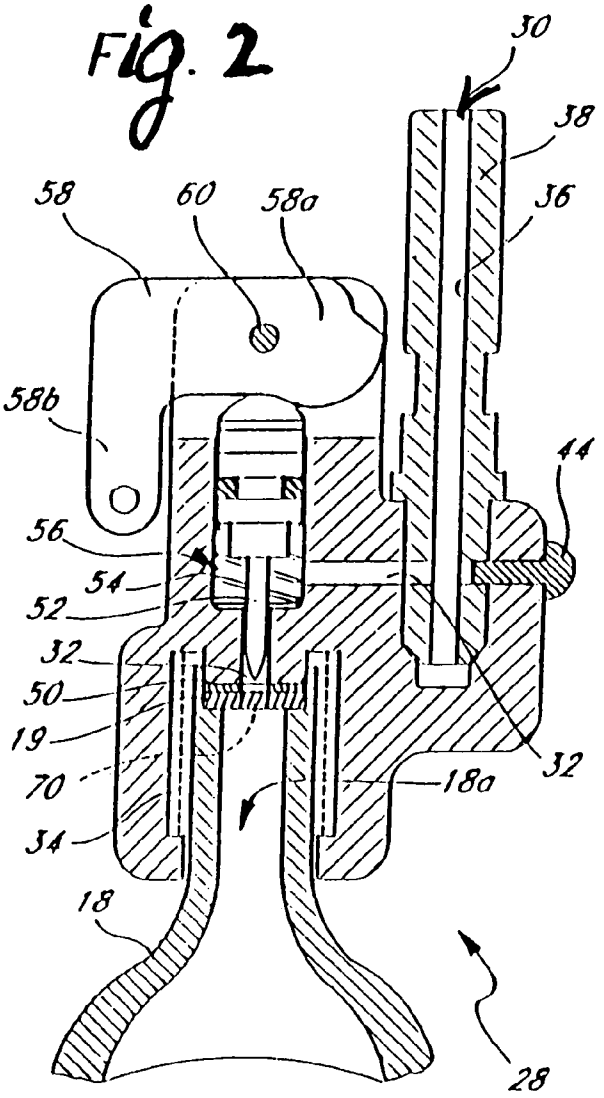

26
24
16
13
15
62
40
40a
46
42
48
12
18
22
10
14
20
12b

FIG. 2


30
38
36
58
60
58a
58b
44
56
54
52
32
50
19
70
18a
32
34
18
28

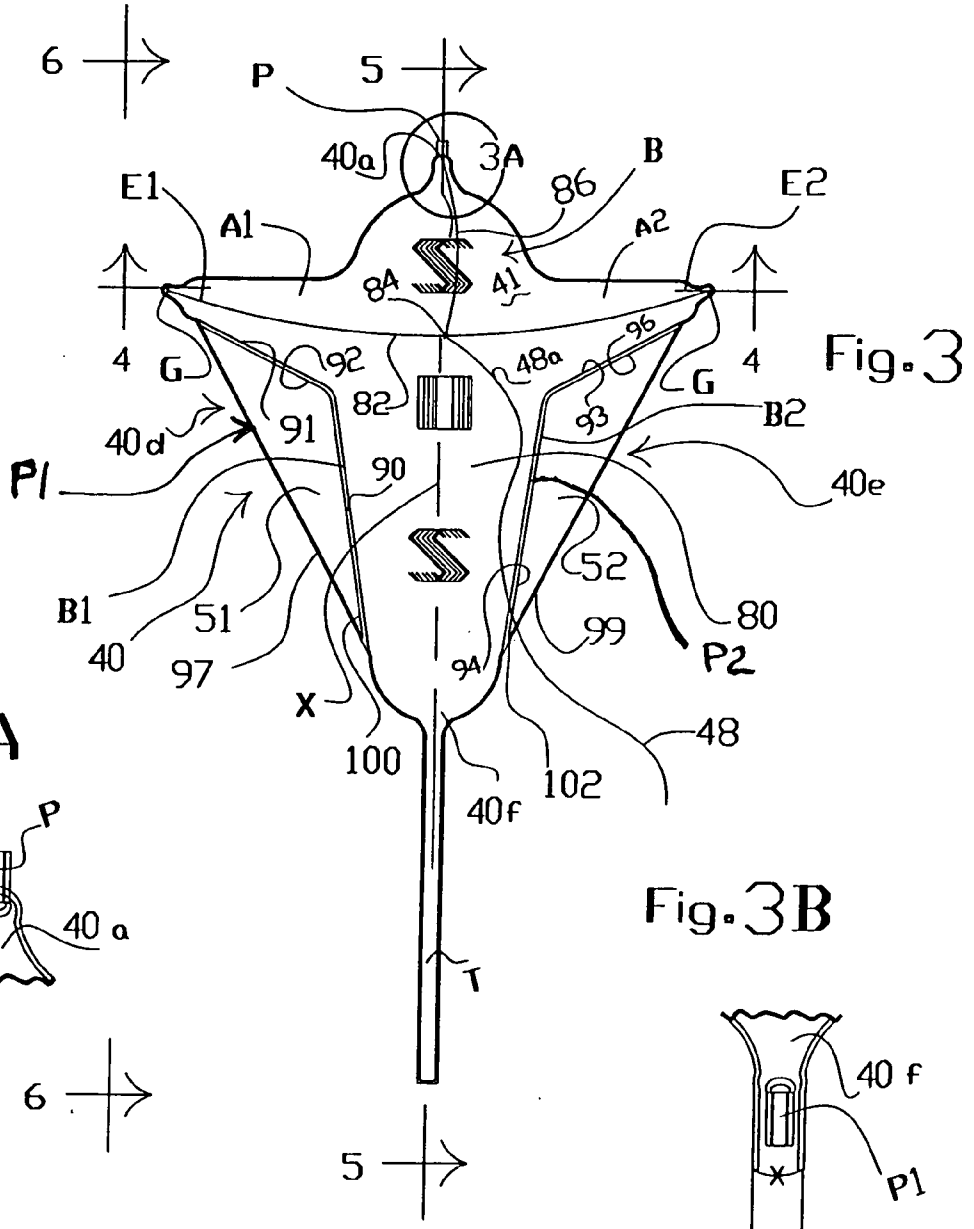



Fig. 3

Fig. 3A




Fig. 3B

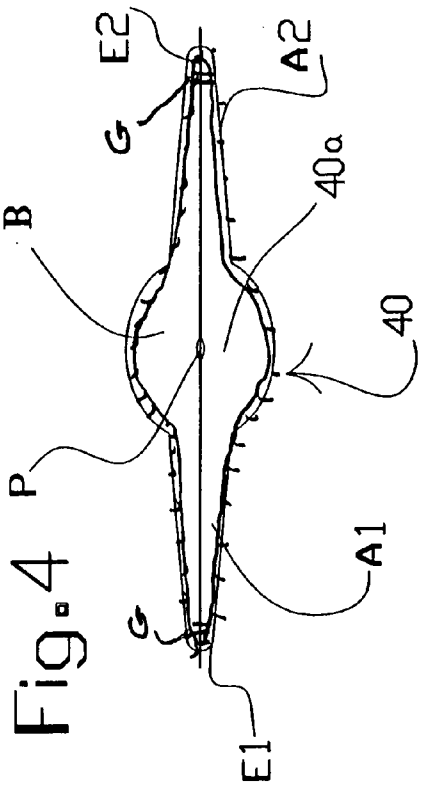



Fig. 4

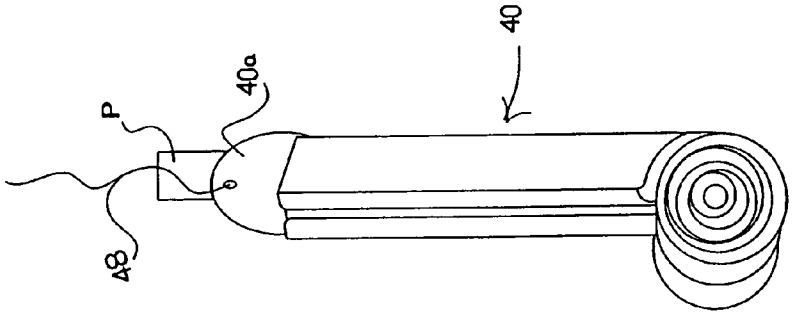



Fig. 9

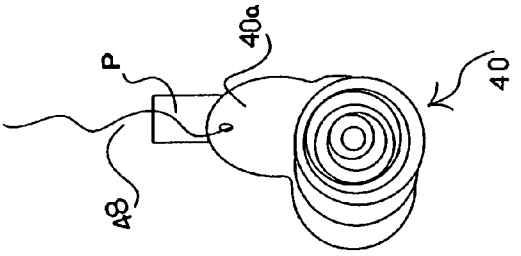



Fig. 10

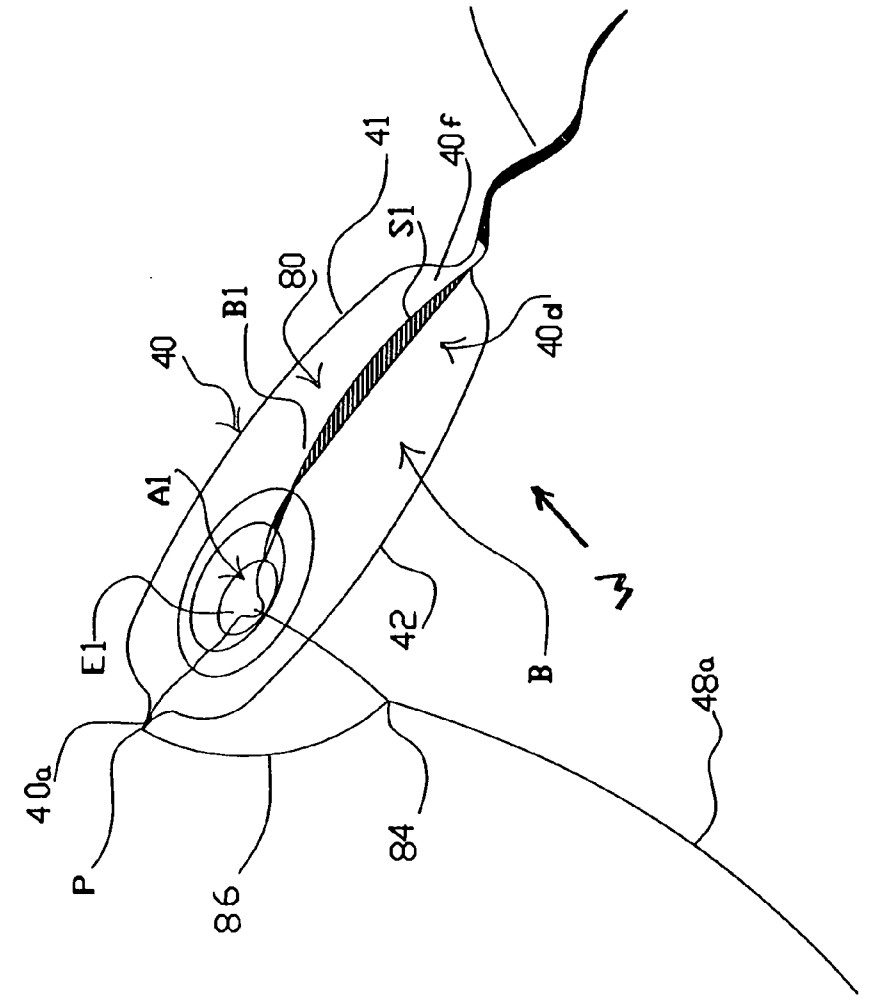

41
40f
S1
80
B1
40
40d
A1
E1
42
B
M
40a
P
86
84
48a

Fig. 6

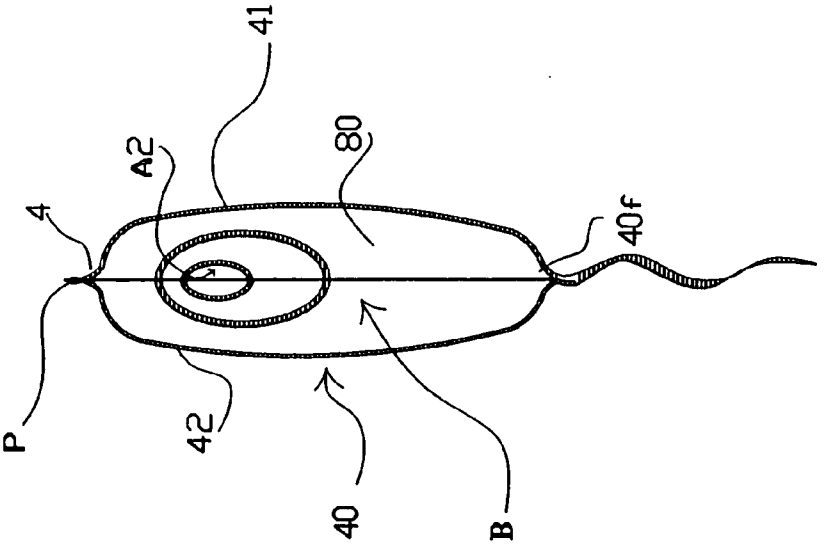

41
A2
80
4
40f
P
42
40
B

Fig. 5

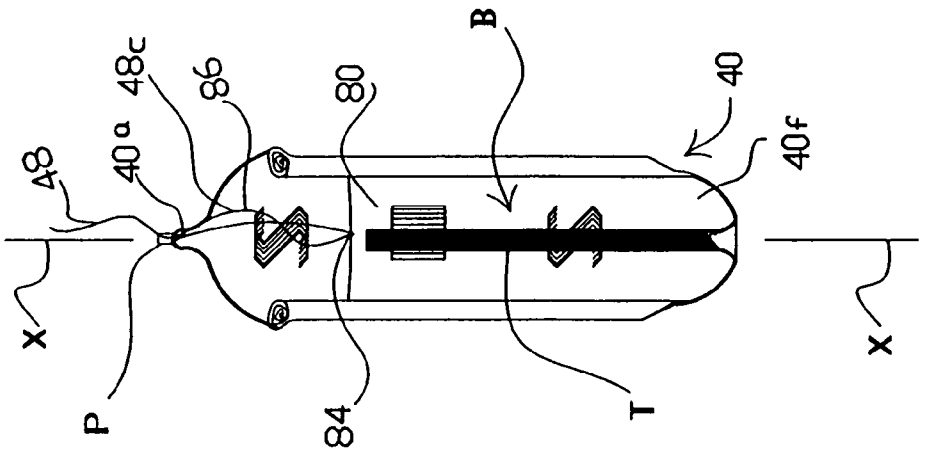

B
48c
86
80
40
40f
48
40a
X
X
P
84
T

Fig. 8

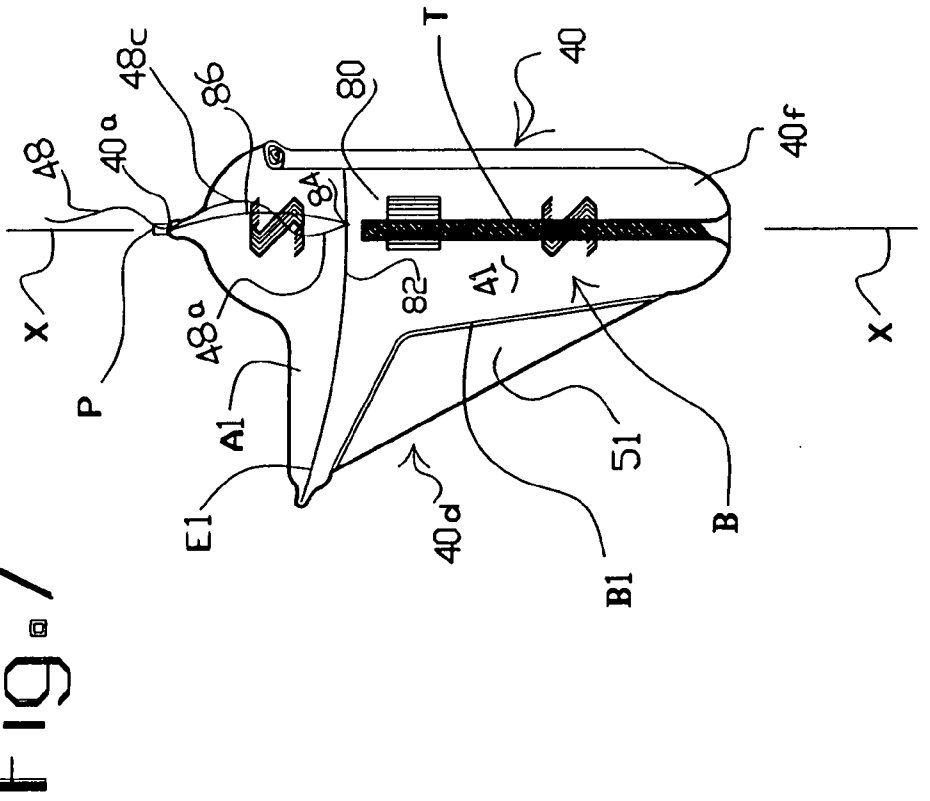

T
40
48c
86
80
40f
48
40a
84
X
X
82
41
48a
P
A1
51
E1
40d
B
B1

Fig. 7

# RESCUE DEVICE WITH KITE-TYPE BALLOON MARKER, KITE-TYPE BALLOON & METHOD

## RELATED PATENT APPLICATIONS & INCORPORATION BY REFERENCE

[0001] This application is a utility application based on U.S. provisional patent application Serial No. 60/448,759, entitled "Rescue Device With Kite-Type Balloon Marker, Kite-Type Balloon, & Method," filed Feb. 20, 2003. This related application is incorporated herein by reference and made a part of this application. If any conflict arises between the disclosure of the invention in this utility application and that in the related provisional application, the disclosure in this utility application shall govern. Moreover, the inventors incorporate herein by reference any and all U.S. patents, U.S. patent applications, and other documents cited or referred to in this application or cited or referred to in the U.S. patents and U.S. patent applications incorporated herein by reference.

## DEFINITIONS

[0002] The words "comprising,""having,""containing," and "including,"and other forms thereof, are intended to be equivalent in meaning and be open ended in that an item or items following any one of these words is not meant to be an exhaustive listing of such item or items, or meant to be limited to only the listed item or items.

[0003] "Kite-type balloon" means a balloon including kite structure that enables the balloon to remain aloft under windy weather conditions.

## BACKGROUND OF INVENTION

[0004] U.S. Pat. No. 5,582,127 discloses a rescue device that holds within a housing a compacted balloon that is released from the housing and inflated upon removing a detachable cover closing an open end of the housing. As the balloon is inflated it escapes from the open end. A line secured between the balloon and the device keeps the balloon in the vicinity of a lost or injured person. The released balloon hovers aloft in the vicinity of the lost or injured person to identify his or her location. Under some weather conditions, particularly under very windy weather conditions, the balloon fails to remain aloft.

## SUMMARY OF INVENTION

[0005] This invention has one or more features as discussed subsequently herein. After reading the following section entitled "DETAILED DESCRIPTION OF SOME EMBODIMENTS OF THIS INVENTION," one will understand how the features of this invention provide its benefits. These benefits include, but are not limited to: providing a reliable rescue device using a kite-type balloon that remains elevated even in windy weather conditions.

[0006] Without limiting the scope of this invention as expressed by the claims that follow, some, but not necessarily all, of its features are:

[0007] One, the rescue device that marks the location of lost or injured person comprises a kite-type balloon having a self-sealing inflation port. When inflated, secured by a line, and then released, this kite-type balloon hovers aloft in the vicinity of the lost or injured person to identify his or her location, even under windy weather conditions.

[0008] Two, the device may include a housing that retains the balloon in a deflated, predetermined compact condition. The housing may enclose a container of pressurized, lighter than air gas, an inflator valve a detachable cover member closing an open end of the housing, and a valve actuator connected to the cover member. Upon removal of the cover member from the open end of the housing, the valve actuator opens the inflator valve, causing the lighter than air gas to enter the compacted balloon to inflate the balloon, which exits the open end of the housing solely under the influence of the pressurized gas.

[0009] Three, the balloon may have different configurations, for example, in one embodiment it has a substantially triangular configuration. In many configurations, the balloon has opposed faces, opposed lateral sides, opposed ends, and a longitudinal axis extending between the opposed ends. The balloon may be substantially symmetrical about this axis. The inflation port may be nearby one of the ends of the balloon. In one embodiment, at least a portion of the balloon is radar reflective. The balloon may include a central hollow body adapted to be filled with the gas. In one embodiment, the inflatable body may have a substantially cross configuration with a pair of opposed arms intersecting a beam element. The arms have outer ends, and a pair of sail elements may be attached to the arms. Each sail element may be connected to one arm and to a side of the beam element. The sail elements may have a substantially triangular configuration and they may have an outer edge tapering inward to terminate at or near a tail end of the balloon.

[0010] Four, one or more lines may be used with the device. In one embodiment, each arm of the balloon body has an outer end and a first connector line extends between the outer ends and a second connector line extends between a head end of the balloon and an intermediate portion of the first connector line. A third line adapted to secure the balloon at or near the location of the person being rescued has an end connected to an intermediate portion of the first connector line. With the balloon in the predetermined compact condition, a portion of the third line extends outward from the compacted balloon.

[0011] Five, the deflated balloon in the housing is in a predetermined compact condition. In this compact condition, each of the lateral sides of the balloon are rolled inward against one of the balloon's faces and towards the longitudinal axis so that the balloon is a partially rolled balloon. This partially rolled balloon is then rolled inward from the end opposed to the inflation port, towards the inflation port, into the predetermined compact condition.

[0012] Six, the balloon may include a tail. This tail may be attached to a tail end of the hollow body and the self-sealing inflation port may be near this tail end or near a head end of the hollow body. The tail may have a length that when folded inward does not intersect with the first connector line.

[0013] These features are not listed in any rank order nor is this list intended to be exhaustive.

[0014] This invention also includes a method of marking an individual's location to facilitate rescue even under windy weather conditions. Central to this method is the use of a kite-type balloon having a self-sealing inflation port

adapted to be placed in communication with a source of lighter than air gas to inflate the kite-type balloon. A line secures the balloon at the location, so the inflated balloon hovers above the location at or nearby the person being rescued. When rescue is desired, the deflated kite-type balloon is inflated and released. If a portion of the balloon is radar reflective, radar may be used to locate the balloon hovering aloft in the vicinity of the person being rescued.

## DESCRIPTION OF DRAWING

[0015] Some embodiments of this invention, illustrating all its features, will now be discussed in detail. These embodiments depict the novel and non-obvious rescue device using a kite-type balloon as shown in the accompanying drawing, which is for illustrative purposes only. This drawing includes the following figures (Figs.), with like numerals indicating like parts:

[0016] **FIG. 1** is a cross-sectional view of one embodiment of the rescue device of this invention.

[0017] **FIG. 2** is an enlarged cross-sectional view of the inflator valve assembly used in the rescue device of this invention.

[0018] **FIG. 3** is a plan view of the kite-type balloon of this invention in an inflated condition.

[0019] **FIG. 3A** is a fragmentary view taken along line **3A** of **FIG. 3** showing the self-sealing inflation port of the kite-type balloon at head end of the balloon.

[0020] **FIG. 3B** is a fragmentary view of the tail end of an alternate embodiment the kite-type balloon of this invention with its a self-sealing inflation port at the tail end of the balloon.

[0021] **FIG. 4** is a cross-sectional view of the inflated kite-type balloon taken along line **4-4** of **FIG. 3**.

[0022] **FIG. 5** is a cross-sectional view of the inflated kite-type balloon taken along line **5-5** of **FIG. 3**.

[0023] **FIG. 6** is a side elevational view of the inflated kite-type balloon taken along line **6-6** of **FIG. 3** showing the balloon aloft during windy weather conditions.

[0024] **FIG. 7** is a plan view of the kite-type balloon illustrated in **FIG. 3** in a deflated, partially compacted condition with one lateral side partially rolled up.

[0025] **FIG. 8** is a plan view of the deflated kite-type balloon illustrated in **FIG. 7** in a partially compacted condition with both lateral sides partially rolled up.

[0026] **FIG. 9** is a perspective view of the deflated kite-type balloon illustrated in **FIG. 7** in a partially compacted condition with both lateral sides completely rolled up and the tail end of the balloon partially rolled up towards the head end of the balloon.

[0027] **FIG. 10** is a perspective view of the deflated kite-type balloon illustrated in **FIG. 7** in a completely compacted condition.

## DETAILED DESCRIPTION OF SOME EMBODIMENTS OF THIS INVENTION

[0028] As best illustrated in **FIGS. 1 and 2**, the rescue device **10** of this invention includes a housing **12** holding a deflated balloon **40** in a compacted condition to fit within the housing **12**. The balloon inflates upon removal from the housing **12**.

[0029] The housing **12** has a closed bottom end **14** and an open top end **16**. The housing **12** may have on its side a belt clip (not shown) that allows a user to clip the device **10** to his or her belt, and a wrist strap **12***b* for facilitating carrying the device. Contained within the housing **12** is a cylinder **18** of pressurized, lighter-than air gas such as helium. There is a pad **20** disposed between the bottom of the cylinder **18** and the closed bottom end **14** of the housing **12** on which the end of the cylinder **18** rests and a retainer ring **22** force fitted between the wall of the housing **12** and an intermediate section of the cylinder **18**. The one end of the cylinder has a seal **19** (**FIG. 2**), which, when pierced, allows gas to escape from the cylinder **18**. A cover or cap **24** closes off the open top end **16** of the housing **12**, and an "O" ring seal **13** in a groove **15** provides a water-tight seal. A pull ring **26** is attached to the exterior of the cap **24**, allowing the user to pull the cap from the open top end **16** of the housing **12**. The balloon **40** inflates with the removal of the cap **24**.

[0030] As depicted in detail in **FIG. 2**, an inflator valve **28** is connected to an outlet **18**a of the cylinder **18**. It includes a valve body **30** having an opening **34** that is in communication with the outlet **18***a* and a stem **38** including a passageway **36**. There is a passageway **32** extending between the openings **34** and into the passageway **36**. As shown in **FIG. 2, a** kite-type balloon **40** with a self-sealing inlet end **40***a* is used in this invention. This self sealing inlet end **40***a* includes an inflation port P. The balloon **40** has a self-sealing inlet end **40***a* as described in U.S. Pat. No. 4,917,646. The inlet end **40***a* of the balloon **40** is retained on the stem **38** by a clamping member or retainer ring **42**, and the stem is held in position in the valve body **30** by a set screw **44**. Mounted on the valve body **30** is a spool **46** (**FIG. 2**) which has wound about it a secured fish line **48**. One end (not shown) of the secured line **48** is attached to the spool **46** and the other end **48***a* of the secured line is attached to the balloon **40** as shown in **FIG. 3**.

[0031] As depicted in **FIG. 2**, in the passageway **32** is a thin annular gasket **50**. A plunger pin **52** is received in a bore **54** in the valve body **30** and is spring biased by a compression spring **56** that normally urges the plunger pin outward from the bore. A valve actuator includes an L-shaped lever **58** attached to the valve body **30** by a pivot rod **60**. This lever **58** has one arm **58***a* resting on top of the head of the plunger pin **52**. There is one end of a pull cord **62** (**FIG. 1**) attached to the cap **24** and another end attached to the other arm **58***b* of the lever **58**. Upon removing the cap **24**, the pull cord **62** yanks the arm **58***b* of the lever **58** causing it to rotate in a clockwise direction as shown in **FIG. 2**. The arm **58***a* of the lever **58** pivots about the rod **60**, forcing the plunger pin **52** downward against the action of the spring **56** to pierce the seal **19**, inflating the balloon **40**.

[0032] The deflated balloon **40** is folded and rolled up as illustrated in **FIGS. 7 through 10**. Specifically, the deflated balloon **40** is generally flat, and upon being inflated has a substantially triangular configuration as shown in **FIG. 3**. It includes opposed faces **41**, **42**, lateral sides **40***d*, **40***e*, and opposed ends, the self sealing inlet end **40***a* (also referred to as the head end) and the tail end **40***f*. As shown in **FIGS. 7 and 8**, when deflated, each lateral side **40***d* and **40***e* of the

balloon **40** is rolled inward towards the balloon's longitudinal axis X. Next, as depicted in **FIGS. 9 and 10**, the tail end **40**f of the balloon, with the lateral sides rolled up to the longitudinal axis X, is rolled towards the head or self sealing inlet end **40***a*. This manner of rolling the balloon **40** insures that it will open when inflated and be forced from the open end **16** of the housing **12** and be released to the atmosphere solely under the influence of the pressurized gas filling the balloon. The balloon **40** may have surface portions covered with a thin, foil-like, metal film that is light and RADAR reflective. Thus, in the day light, the metal film will reflect light like a mirror. At night, radar can be used to detect the balloon **40**. The balloon **40** may also have the words "HELP"(not shown) printed on one face **24** and international distress symbol "S.O.S" printed on the other face **41**. The balloon **40** typically is made from two sheets of plastic such as, for example, Mylar®, overlying each other and bonded together along abutting sheet edges forming the perimeter P1 of the balloon **40** and abutting sheet edges forming the perimeter P2 of a central hollow body B.

[**0033**] As **FIGS. 3 through 6** depicted, the balloon **40**, as it is inflated, unfurls a pair of sheet type, triangular configured sail elements S1 and S2 extending from the hollow body B. The sail elements S1 and S2 are attached to the opposed sides B1 and B2 of the balloon **40**. In addition to the sail elements S1 and S2, the balloon **40** includes a tail T attached to the tail end **40***f* of the balloon **40**. The sail element S1 is attached to the side B1, and the sail element S2 is attached to the side B2. The hollow body B includes a central beam **80** that extends between the head or self-sealing inlet end **40***a* and the tail end **40***f*, and tapers inwardly towards the tail end. There are opposed arms A1 and A2 that extend outwardly from an intermediate portion of the beam **80**, each at a substantially right angle to the longitudinal axis X and each tapering inwardly towards their respective outer ends E1 and E2. The balloon **40** is symmetrical about the longitudinal axis X. As best illustrated in **FIG. 3**A, the inflation port P is near the head or self-sealing end **40***a*. Or, as illustrated in **FIG. 3**B, the self-sealing inflation port P1 may be located near the tail end **40***f*.

[**0034**] In one embodiment, the hollow body B has a substantially cross configuration and the pair of opposed arms A1 and A2 are aligned and intersected the beam **80**. As depicted best in **FIGS. 4, 5** and **6**, the entire hollow body B, including the arms A1 and A2 and beam **80**, is filled with the gas upon inflation of the balloon **40**. As illustrated in **FIG. 3**, the sail element S1 has an edge **91** connected to the arm Al and the side B1, having an inner edge **90** attached to the lower portion of the beam **80**, extending between the underside **92** of the arm A1 and the tail end **40***f*. The other sail element S2 has an edge **93** connected to the arm A2 and the other side B2, having an inner edge **94** attached of the lower portion of the beam **80**, extending between the underside **96** of the arm A2 and the tail end **40***f*. Adjacent each of edges **91** and **93** of each sail element S1 and S2 is, respectively, an outer edge **97** and **99**. Each of these edges **97** and **99** tapers inward to terminate at an acute angle tip **100** and **102**, respectively, near the tail end **40***f*. The tail T has a length such that, when folded inward as shown in **FIGS. 7 and 8**, does not intersect with the connector line **82**.

[**0035**] Each arm A1 and A2 has at its respective outer end E1 and E2 a grommet G therein and a connector line **82** extends between these outer ends and is tied to the grommets G. The end **48***a* of the secured line **48** is connected to an intermediate, preferably central, portion of the connector line **82** in a knot **84** (**FIG. 3**). Another connector line **86** extends between the knot **84** and the head or self-sealing end **40***a*. The use of the connector lines **84** and **86** is desirable because they stabilize the inflated balloon **40** when aloft in windy weather conditions.

[**0036**] When compacting the balloon **40** as shown in **FIG. 7** and **8**, a portion **48***c* of the secured line **48** that extends from the end **48***a* connected to the knot **84** is positioned to lie substantially along or nearby the longitudinal axis X and is oriented to extend outward from the head end **40***a* including the inflation port P of the compacted balloon **40**. If the inflation port P is at the tail end **40***f* as illustrated in **FIG. 3**B, the portion **48***c* of the secured line **48** is positioned to lie substantially along or nearby the longitudinal axis X, but is now oriented to extend outward from the tail end of the compacted balloon.

[**0037**] To use the rescue device **10** of this invention, the injured or lost person simply grasps the pull ring **26** and pulls the cap **24** from the open end **16** of the housing **12**. Simultaneously, the L-shaped lever **58** pivots to depress the plunger pin **52**, so that the tip of the plunger pin **52** punctures the seal **19**. Thus, with one single action of the user, the device **10** is actuated. Upon release of the cap **24**, the puncture pin **52** is returned by the action of the spring **56** to the position shown in **FIG. 2**. This creates an opening **70** in the seal **19**, allowing the pressurized lighter-than-air gas to flow through the passageways **32** and **36** into the self-sealing inlet end **40***a* of the balloon **40**, inflating the balloon **40** to its fully inflated condition as depicted in **FIG. 3**. As the balloon **40** is inflated, it is forced out of the housing **12** through the uncovered, open end **16** and rises in the atmosphere, with the gas being retained in the balloon due to the self sealing feature at the inlet end **40***a*. As the gas fills the balloon **40**, the internal pressure causes the self-sealing inlet **40***a* to seal. The pressure inside the cylinder **18** ranges between 2000 and 3000 psig. This is sufficient to insure that the balloon **40** is inflated to maximum capacity under a wide and varying range of temperature and pressure encounter at different altitudes and in different environments. The secured line **48** maintains attached to both the balloon **40** and the device **10**. The device **10** has sufficient weight so that the balloon **40** does not lift the device **10** into the atmosphere. As shown in **FIG. 6**, if weather conditions are windy, the unfurled sail elements S1 and S2 catch wind blowing in the direction W, so the balloon **40** behaves as a kite. Thus, the use of the kite-type balloon **40** overcomes the problem of maintaining a balloon aloft under windy weather conditions.

## SCOPE OF THE INVENTION

[**0038**] The above presents a description of the best mode contemplated of carrying out the present invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains to make and use this invention. This invention is, however, susceptible to modifications and alternate constructions from that discussed above which are fully equivalent. Consequently, it is not the intention to limit this invention to the particular embodiments disclosed. On the contrary, the intention is to cover all modifications and alternate constructions coming within the spirit and scope of the invention as generally expressed by

the following claims, which particularly point out and distinctly claim the subject matter of the invention:

**1**. A rescue device that marks a location, comprising

a deflated kite-type balloon having a self-sealing inflation port,

an inflator valve in communication with the self-sealing inflation port of the deflated balloon, and

a container which holds a pressurized, lighter than air gas, said container having an outlet port in communication with the inflator valve, said inflator valve upon being opened causing the lighter than air gas to enter the deflated balloon to inflate the balloon.

**2**. The rescue device of claim 1 where balloon comprises a central hollow body with opposed sides, said hollow body being filled with the gas upon inflation of the balloon, and a pair of sail elements, one sail element attached to one opposed side and the other element attached to the other opposed side.

**3**. The rescue device of claim 1 where balloon has a substantially triangular configuration.

**4**. The rescue device of claim 1 where balloon includes a tail.

**5**. The rescue device of claim 1 where the hollow body has a central longitudinal axis and the balloon is substantially symmetrical about said axis.

**6**. The rescue device of claim 1 where balloon comprises

a hollow body with a head end, a tail end, and opposed outwardly extending arms, said hollow body being filled with the gas upon inflation of the balloon, and

a pair of sail elements connected to the hollow body, one sail element extending between one arm and the tail end and the other sail element extending between the other arm and the tail end.

**7**. The rescue device of claim 6 where the hollow body has a central longitudinal axis extending between the head end and the tail end and the balloon is substantially symmetrical about said axis.

**8**. The rescue device of claim 6 where each arm has an outer end and a first connector line extends between said outer ends and a second connector line extends between the head end and an intermediate portion of the first connector line.

**9**. The rescue device of claim 8 including a third line adapted to secure the balloon at the location, said third line including an end connected to an intermediate portion of the first connector line.

**10**. The rescue device of claim 9 where, with the balloon is in a predetermined compact condition, a portion of the third line extends outward from the compacted balloon.

**11**. The rescue device of claim 6 where a tail is attached to the tail end of the hollow body and the self-sealing inflation port is near said tail end.

**12**. The rescue device of claim 6 where a tail is attached to the tail end of the hollow body and the self-sealing inflation port is near the head end.

**13**. The rescue device of claim 6 where the sail elements each have a substantially triangular configuration.

**14**. The rescue device of claim 1 including a line adapted to secure the balloon at the location and a housing with the deflated balloon in said housing in a predetermined compact condition.

**15**. The rescue device of claim 14 where

said balloon has opposed faces, opposed lateral sides, opposed ends, and a longitudinal axis extending between said opposed ends, said inflation port being nearby one of said ends of the balloon,

each of said lateral sides being rolled inward against one of said faces and towards the longitudinal axis so that said balloon is a partially rolled balloon, which is then rolled inward from the end opposed to the inflation port, towards the inflation port, into said predetermined compact condition.

**16**. The rescue device of claim 15 including a detachable cover member closing an open end of the housing and a valve actuator connected to the cover member so that, upon removal of the cover member from the open end of the housing, the valve actuator opens the inflator valve causing the lighter than air gas to enter the compacted balloon to inflate the balloon, which exits the open end of the housing solely under the influence of a pressurized gas.

**17**. The rescue device of claim 16 where the housing encloses the container, the inflator valve, and the compacted balloon.

**18**. A rescue device that marks a location, comprising

a housing having an open end,

a deflated kite-type balloon having a self-sealing inflation port, said balloon being in a predetermined compact condition and positioned within the housing,

said balloon comprising

a hollow body that is filled with the gas upon inflation of the balloon,

a sail element attached to the body, and

a tail attached to an end of the balloon,

an inflator valve in communication with the inflation port of the deflated balloon,

a container which holds a pressurized, lighter than air gas, said container having an outlet port in communication with the inflator valve, said inflator valve upon being opened causing the lighter than air gas to enter the deflated balloon to inflate the balloon.

**19**. The rescue device of claim 18 including a secured line that secures the inflated balloon to the device.

**20**. A rescue device that marks a location, comprising

a housing having an open end,

a deflated kite-type balloon in the housing and having a self-sealing inflation port,

said balloon comprising

a hollow body with a head end, a tail end, and opposed outwardly extending arms each having an outer end, said hollow body being filled with the gas upon inflation of the balloon,

a pair of sail elements connected to the hollow body, one sail element extending between one arm and the tail end and the other sail element extending between the other arm and the tail end, and

an elongated tail connected to the tail end,

an inflator valve in communication with the inflation port of the deflated balloon,

a container which holds a pressurized, lighter than air gas, said container having an outlet port in communication with the inflator valve, said inflator valve upon being opened causing the lighter than air gas to enter the deflated balloon to inflate the balloon,

a secured line that secures the inflated balloon to the device, and

a first connector line that extends between the outer ends of the arms,

said secured line including an end connected to an intermediate portion of the first connector line.

**21**. The rescue device of claim 20 including a second connector line that extends between the head end and an intermediate portion of the first connector line.

**22**. The rescue device of claim 20 where the hollow body has a central longitudinal axis extending between the head end and the tail end and the balloon is substantially symmetrical about said axis.

**23**. The rescue device of claim 22 where balloon has a substantially triangular configuration.

**24**. The rescue device of claim 20 where the deflated balloon is in a predetermined compacted condition to fit within the housing.

**25**. The rescue device of claim 24 where said compacted balloon includes

a longitudinal axis extending between the head end and tail end and has opposed faces, opposed lateral sides and the inflation port is nearby one of said ends,

said tail is folded inward lengthwise towards said head end substantially along the longitudinal axis and each of said lateral sides is rolled inward against one of said faces and towards the longitudinal axis so that said balloon is a partially rolled balloon, which is then rolled inward from the end opposite the inflation port towards said one end including the inflation port, into said predetermined compact condition,

a portion of the secured line that extends from the end connected to the intermediate portion of the first connector line is positioned to lie substantially along or nearby the longitudinal axis and to extend outward from the compacted balloon from said one end including the inflation port.

**26**. The rescue device of claim 25 where the tail has a length that when folded inward does not intersect with the connector line.

**27**. The rescue device of claim 20 including a detachable cover member closing the open end of the housing and a valve actuator connected to the cover member so that, upon removal of the cover member from the housing, the valve actuator opens the inflator valve causing the lighter than air gas to enter the compacted balloon to inflate the balloon, which exits the open end of the housing solely under the influence of a pressurized gas.

**28**. The rescue device of claim 27 where the housing encloses the container, the inflator valve, and the compacted balloon.

**29**. A rescue device that marks a location, comprising

a housing having an open end,

a deflated kite-type balloon having a self-sealing inflation port, said balloon positioned within said housing,

said balloon comprising

a hollow inflatable body having a substantially cross configuration with a pair of opposed arms intersecting a beam element, said arms having outer ends, and

a pair of sail elements, each sail element connected to one arm and to a side of the beam element, and

an elongated tail connected to the tail end,

an inflator valve in communication with the inflation port of the deflated balloon,

a container which holds a pressurized, lighter than air gas, said container having an outlet port in communication with the inflator valve, said inflator valve upon being opened causing the lighter than air gas to enter the deflated balloon to inflate the balloon,

a secured line that secures the inflated balloon to the device, and

a connector line that extends between outer ends of the arms,

said secured line including an end connected to an intermediate portion of the connector line.

**30**. A kite-type balloon comprising

a hollow body adapted to be filled with the gas upon inflation of the balloon, and

a sail element connected to the hollow body.

**31**. The kite-type balloon of claim 30 where said balloon has a substantially triangular configuration.

**32**. The kite-type balloon of claim 30 where balloon includes a tail.

**33**. The kite-type balloon of claim 30 where at least a portion of the balloon is radar reflective.

**34**. The kite-type balloon of claim 30 where body has opposed lateral sides and a sail element is attached to each lateral side.

**35**. The kite-type balloon of claim 34 where the hollow body has a central longitudinal axis and the balloon is substantially symmetrical about said axis.

**36**. A kite-type balloon comprising

a hollow body with a head end, a tail end, and opposed outwardly extending arms, said hollow body adapted to be filled with the gas upon inflation of the balloon, and

a pair of sail elements connected to the hollow body, one sail element extending between one arm and the tail end and the other sail element extending between the other arm and the tail end.

**37**. The kite-type balloon of claim 36 including a tail attached to the tail end of the hollow body and the hollow body has a central longitudinal axis extending between the head end and the tail end and the balloon is substantially symmetrical about said axis.

**38**. The kite-type balloon of claim 36 where at least a portion of the balloon is radar reflective.

**39**. The kite-type balloon of claim 36 where said balloon has a substantially triangular configuration.

**40**. The kite-type balloon of claim 36 where the sail elements each have a substantially triangular configuration.

**41**. A kite-type balloon comprising

a hollow inflatable body having a substantially cross configuration including a pair of opposed arms intersecting a beam element, and

a pair of sail elements, each sail element connected to one arm and to a side of the beam element.

**42**. The kite-type balloon of claim 41 where each sail element has a substantially triangular configuration.

**43**. The kite-type balloon of claim 41 where the beam element has a longitudinal axis and the balloon is substantially symmetrical about said axis.

**44**. The kite-type balloon of claim 41 including a tail attached to an end of the inflatable body and where each arm has an outer end and the beam element has a head end and a tail end, and each sail element has an outer edge tapering inward to terminate at or near the tail end.

**45**. The kite-type balloon of claim 44 including

a first connector line that extends between the opposed outer ends of the arms, and

a second connector line that extends between the head end and an intermediate portion of the first connector line.

**46**. A method of marking an individual's location to facilitate rescue even under windy weather conditions, comprising

providing

(a) a source of lighter than air gas,

(b) a deflated kite-type balloon having a self-sealing inflation port adapted to be placed in communication with the source of lighter than air gas to inflate the kite-type balloon, and

(c) a line adapted to secure the balloon at the location, and

when rescue is desired, inflating the deflated kite-type balloon with said gas from said source and releasing the inflated kite-type balloon with the line secured to the balloon and at or near said location.

**47**. The method of claim 46 where at least a portion of the kite-type balloon is radar reflective.

**48**. The method of claim 46 where the kite-type balloon comprises

a hollow body adapted to be filled with the gas upon inflation of the balloon, and

a sail element connected to the hollow body.

**49**. The method of claim 46 where the kite-type balloon comprises

a hollow body with a head end, a tail end, and opposed outwardly extending arms, said hollow body adapted to be filled with the gas upon inflation of the balloon, and

a pair of sail elements connected to the hollow body, one sail element extending between one arm and the tail end and the other sail element extending between the other arm and the tail end.

**50**. The method of claim 46 where the kite-type balloon comprises

a hollow inflatable body having a substantially cross configuration including a pair of opposed arms intersecting a beam element, and

a pair of sail elements, each sail element connected to one arm and to a side of the beam element.

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